

Nigerian Listed Companies' Features and Intellectual Capital Qualitative Information Disclosures: An Empirical Investigation

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Article DOI: 10.48028/ijprds/ijaraebp.v9.i1.03

Abstract

The study examined how characteristics of Nigerian listed firms influence intellectual capital information disclosure. The study analyzed factors like board size, profit margin, industry type, and firm size using binomial logistic regression. Results showed that profit margin and industry type significantly impacted intellectual capital disclosure in the consumer and industrial goods sectors. The study recommends that Nigeria's Financial Reporting Council review qualitative disclosure requirements and establish a special group to develop standards for intellectual capital disclosure. This would boost stakeholder confidence, enhance comparability of audited accounts, and align Nigerian companies with global standards. By implementing these recommendations, Nigerian companies can improve transparency and accountability in their financial reporting.

Keywords: *Physiognomies, Likelihood, Intellectual Capital Qualitative & Disclosures*

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Background of the Study

The International Accounting Standards Board (IASB) considers the primary objective of financial reporting to be providing useful information for the benefit of all stakeholders (IASB, 2015). To achieve this objective, management is required to disclose non-financial information that goes beyond the quantitative disclosures in the annual report. In essence, financial reporting is expected to encompass both financial (quantitative) and non-financial (qualitative) information, thereby revealing issues related to companies' social and environmental impact, corporate governance, human rights, human development index, corporate risks, and uncertainties (Sierra-Garcia et al., 2018). Inadequate information disclosure would deny existing and potential stakeholders the opportunity to properly evaluate the company for informed decision-making purposes (Serrasqueiro & Mineiro, 2018). Studies have shown that 68% of investors make informed investment decisions based on non-financial information (Ernst & Young, 2017).

Non-financial information refers to data that is non-numerical in nature, including disclosures such as environmental disclosure (CSED), intellectual capital (IC) disclosure, and corporate governance (CG) mechanism disclosure (Donovan et al., 2018; Mohamad et al., 2014, as cited in Eneh et al., 2022). The inclusion of these non-financial disclosures significantly contributes to information transparency, reduces information asymmetry, and is a crucial issue globally (Maroun, 2017). Consequently, a growing number of organizations have recognized its importance and are publishing non-financial or voluntary information to improve communication with stakeholders and provide incremental information about a firm's creditworthiness (Franke, 2018, as cited in Eneh et al., 2022). The trend of non-financial reporting is expected to continue as stakeholders demand more information about its impacts. Environmental, Social, and Governance (ESG) investing has gained prominence in response to growing awareness of critical issues. It's now considered a wise investment strategy when decisions are based on Global Sustainable Investment Alliance (GSIA) or Global Reporting Initiative ESG scores or criteria. Understanding sustainability accounting is pivotal in providing stakeholders with reliable and accurate information (Eneh et al., 2022). The need for non-financial information disclosure is driven by changing stakeholder needs, the need to improve business reporting, promote transparency, corporate accountability, low-cost financing, and good corporate governance, enabling users to rely on disclosed information for informed decision-making (Eccles et al., 2011; Ghasempour & Yusuf, 2014; Healy & Palepu, 2001).

Intellectual capital is a valuable resource that an enterprise develops over time. Different scholars define it as the result of mental processes that create a set of intangible assets used in economic activities, generating income for their owner (organization). These intangible assets encompass the competencies of its people (human capital), the value of its relationships (relational capital), and structural capital (everything left when employees go home), which includes intellectual property (IP) as one component. Intellectual capital is the sum of everything that gives a company a competitive edge. In academia, the term is used to account for the value of intangible assets not explicitly listed on a firm's financial statement. It can also be referred to as national intangible capital (NIC) (Brooking, 1997; Edvinsson & Malone,

1997). Early methods for measuring intellectual capital include the balanced scorecard (BSC) framework, the Skandia Navigator, and the Intangible Asset Monitor. The Value-Added Intellectual Coefficient (VAIC) method, introduced in 1993, measures the value created by intellectual capital. While external factors like inflation, exchange rates, and socioeconomic conditions primarily determine changes in stock returns, intellectual capital contributes to a stock's return growth, even if it doesn't affect current earnings (Eneh et al., 2022).

Issues of non-financial information disclosure remain a major concern due to the inadequacy of traditional financial information in corporate reports. Prior studies have indicated that non-financial information disclosure has been accorded lower priority compared to traditional financial information, which involves numerical or quantitative disclosures in annual reports. Empirical evidence from information disclosure researchers worldwide shows that the lack of non-financial information disclosure is linked to low transparency and information asymmetry. Low transparency implies that insufficient information is communicated to the investing community and users of corporate reports, resulting in information asymmetry between parties (Bose et al., as cited in Eneh et al., 2022). Prior literature emphasizes the increasing importance of non-financial information in evaluating firms' value over time. Although financial information remains crucial in firm valuation and decision-making for investors and external stakeholders (Deegan, 2002), financial statements are inadequate in reflecting intangible and non-financial value drivers, such as corporate governance, risk management, environmental issues, and employee experience. These factors explain a growing part of firms' value, leading to calls from organizational stakeholders for non-financial information disclosure. The stakes are now too high, requiring consumer and industrial goods companies in Nigeria to adopt a long-term approach and avoid short-termism in strategically planning their operations.

According to Ali and Isa (2018), firm physiognomies refer to characteristics or specific features that distinguish one organization or firm from another. Firm physiognomies are numerous and include features that differentiate one enterprise from another. This study examines the combined effects of board size, industry taxonomy, firm value, and gross profit margin on organizational decisions, including information disclosure in the audited annual accounts and reports of Nigerian listed companies. The current study aims to assess the likelihood of firm characteristics explaining changes in intellectual capital information disclosure, with the intention of determining whether a combined influence can improve the disclosure level of information available to diverse stakeholders of Nigerian listed companies. The specific objective is to determine the likelihood of firm physiognomies explaining changes in intellectual capital information disclosures. The research question focuses on the extent to which the joint effect of board size, gross profit margin, industry type, and firm size explains the likelihood or probability of intellectual capital information disclosure among Nigerian listed consumer and industrial goods firms. The null hypothesis (H₀) tests whether the joint likelihood or probability of board size, gross profit margin, industry taxonomy, and firm value significantly explains changes in intellectual capital qualitative information disclosure among Nigerian listed consumer and industrial goods companies. This study will benefit management, employees, government, creditors, and academia. The remainder of the study is

organized into a review of related literature, methodology, data presentation and analysis, conclusion, and recommendation.

Review of Related Literature

Conceptual Review

Qualitative Information Disclosure Characteristics of Corporate Reporting

The issue of non-financial corporate reporting is a major concern to all classes of users of financial statement as it affects economic decisions of stakeholders. Different accounting professional bodies around the world have made several efforts to define the objectives of voluntary information in the corporate reporting for the benefits and development of financial accounting theory and practice (FASB 2000). Soltani (2007) states that the basic objectives of voluntary information disclosure are that it provides information for the users to make business and economic decisions; help investors predict future cash flows; and, provide information concerning the company's economic resources.

The International Accounting Standard Board (IASB), asserts that the main reason behind corporate reporting is to present useful financial and nonfinancial information about the reporting organisation to potential stakeholders like equity investors, lenders and other creditors for meaningful decision making within their capability as capital providers. The basic objective of corporate reporting is to present qualitative and quantitative information which can be of great benefits to stakeholders like investors, creditors and other users to make crucial investment decisions. The True blood Committee of USA and Corporate Report of UK noted that the main objective of financial statements is to provide meaningful information useful to make reasonable economic decisions. The FASB (USA) in its Concept No. 1 also summarised that financial reporting provides information that are of great benefit to potential investors, creditors and other users in making rational investment, credit and other related decisions.

The essence of voluntary information disclosure is to provide external users useful information about the firm. As more non-financial information is disclosed, it paves way for data to be analysed in relation to the enterprise environment to project their future earnings power. Corporate report is expected to meet certain qualitative informative disclosure according to IASB (2015) framework; the main requirement for the attainment of quality financial reporting is as a result of strict compliance to the objective and the qualitative characteristics of corporate reporting information. Chaney, David, and David (2012) posit that qualitative characteristics guide the selection of preferred accounting methods and policies from among available alternatives so as to make corporate reporting a desirable commodity. Choi and Pae (2011) state that non-financial information disclosure varies a lot even if the companies follow same accounting standards and even if they operate under same financial reporting rules (GAAP) or principles (IFRS).

Non-financial information disclosures make the corporate report useful and distinguished (IASB 2008). It is those qualities that distinguish more useful accounting information from less useful information. The qualitative characteristics that command wider acceptance and

recognition for making information useful in corporate reporting and facilitating earnings quality have been examined (Francis et al., 2004; Bushman & Piotroski, 2006; Holthausen, 2009). Vital qualitative characteristics consist of relevant and faithful representation (IASB, 2008), it defines relevance as the capability of making a difference in the decisions made by the users in their capacity as capital providers. Information that is given greater weight in decision-making is more relevant. Menon and Williams (2010) argue that it is not easy to prepare a general-purpose report which could provide optimal information for all possible users, and which could as well as command universal relevance.

Faithful representation is attained when “the depiction of the economic phenomenon is complete, neutral and free from material error” (IASB 2008). According to Ball (2006), the reliability of any useful measure or accounting description centres on the truthfulness with which it purports to represent and affirmation to users that it has faithful representational feature. A number of information provided in corporate report tends to be more reliable than others because of the phenomena it presented especially as economic resources, obligations, the transactions factor and events that occurred within (Nicholas & Shyam 1980). Ilaboya (2008) suggest that enhancing qualitative characteristics of corporate reporting include comparability, verifiability, timeliness and understandability according to IASB's conceptual framework.

Comparability is the quality of information that enables users to identify similarities and differences between two sets of economic phenomena (IASB, 2008). FASB (1980) defines comparability as. the quality or state of having certain characteristics in common, and comparison is normally a quantitative assessment of the common characteristics. Comparable purposes enable decision-makers to determine relative financial strengths and weaknesses and future prospects between two or more corporate organizations or between periods in a single firm. Pandey (2005) states majorly that comparability is needed to enhance decision makers like creditors, investors and other users of corporate reports to make predictions about financial positions from one accounting year to another and differences caused in income as result of disparity in practices. Bushman and Smith (2004) assert that verification implies and enhances consensus about measurements of some particular phenomenon. According to FASB (1978), verifiability rightly portrays that no more than the numerous approaches are likely to obtain the same measure in the corporate report. This suggests that verification of disclosed accounting information does not give assurance that the information provided in that corporate report has esteem of representational faithfulness and also a measure with a high degree of verifiability is not necessarily relevant to the decision for which it purported to represent to the users.

Timeliness refers to having information available to decision makers before it loses its capacity to influence decisions. Timeliness alone, cannot make disclosed information relevant, but a lack of timeliness, can rob disclosed information of relevance it might otherwise have had (Watts, 2003). It therefore means that it is vital occasionally to sacrifice exactness for timeliness in release of corporate reports, because early released annual report is often more useful compared to precise information which is delayed more than necessary before being

reported to users. Understandability as an attribute, permits users of released corporate report to comprehend its meaning deeply before decision making. Disclosed information in corporate report that users find difficult to comprehend is no longer useful despite its relevance. Watts (2003), opined that understandability implies that disclosed information in corporate report must be presented in simple, suitable, clear form and consistent with the proper description of economic activities of the firm. This implies that judgment needs to be applied in holding the balance between the need to ensure that all material matters are disclosed in corporate report and the need to avoid confusing users by overloading reports with information. Moerman (2006) claims that understandability calls for the provision in the clearest form of all the information in the corporate report which realistically educate users for meaningful decision and the corresponding presentation of the key attributes for the use of the less complicated. Understandability of financial information is governed by a combination of user characteristics, and characteristics inherent in the information.

Consistency is the use of accounting principles from one accounting period to another is a desirable quality, but if pushed too far, it will prove a bottleneck for bringing about improvements in accounting policies, practices, and procedures (Ilaboya, 2008). Furthermore, the change to a preferred accounting method cannot be made without sacrificing consistency to required change from time to time in accounting principles, standards and guidelines. The materiality concept implies that, not all financial information needs to be or should be communicated in accounting reports only material information should be reported (Barth & Schipper, 2008). Therefore, materiality of an item depends not only upon its relative size, but also upon its nature or combination of both quantitative and qualitative characteristics. In effect, accounting information must exhibit certain qualitative attributes for it to be incorporated into the report.

Recommended Frameworks for Non-Financial Reporting

There is a wide range of recommended frameworks from which companies can choose a tool for non-financial report that are not legally binding, but provide necessary and helpful guidance while drafting a report. The non-financial reporting frameworks are initiatives which are jointly seeking to help the organization in non-financial reporting by ensuring legitimacy, clarity of standards, functionality, learning and engagement, clear communication and significance. According to the Non-financial reporting Directive, in providing the non-financial information companies may rely on national frameworks, Union-based frameworks such as the Eco-Management and Audit Scheme (EMAS), or international frameworks. International frameworks for non-financial reporting are: the United Nations (UN) Global Compact, the Guiding Principles on Business and Human Rights implementing the UN "Protect, Respect and Remedy" Framework, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the International Organisation for Standardisation's ISO 26000, the International Labour Organisation's Tripartite Declaration of principles concerning multinational enterprises and social policy, the Global Reporting Initiative. If a reporting company relies on a specific framework (national, European or international), it must state it in its report. Below is a brief summary of the most common non-financial reporting initiatives, frameworks and systems for corporate social responsibility management.

Firm Size

Firm value or size is one of the most influential characteristics in organizational studies. Akbas (2014) and Eneh et al., (2022) provide a summary and overview of the importance of firm size. Firm size has also been shown to be related to industry- sunk costs, concentration, vertical integration and overall non-financial disclosure. Firm size is one of the most acknowledged determinants of a non-financial disclosure performance. It is commonly measured by either natural logarithm of assets, or sales or employees. Larger firms are associated with having more diversification capabilities, ability to exploit economies of scale and scope and also being highly formalized in terms of procedures. Onoja and Agada (2015) described firm size as the quantity and array of production capability and potential a firm possesses or the quantity and diversity of services a firm can concurrently make available to its clients. Firm size plays a significant and crucial role in explaining the kind of relationships the firm has within and outside its operating environment. Omoye (2013) argues that the larger a firm is, the more the influence it has on its stakeholders, and so large firms tend to outperform small firms.

Several studies suggest that a positive relationship exists between company size and non-financial information disclosure. Bigger firms are presumed to be more efficient than smaller ones. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones (Ali & Isa, 2018). Firm size helps in achieving economies of scale which in the long run can lead to improved voluntary disclosure. However, others like, Afolabi (2013) argues that firm size can lead to inferior disclosure due to informalized procedures and market inefficiencies. Modugu and Eboigbe (2017) found that enterprise size significantly linked to better business performance. Larger enterprises were found to have higher level of success. Similarly, Owusu-ansah (2013) found that larger firms have higher ROA, ROE and operational self-sufficiency. Small firms not only find it difficult to compete with larger firms in the market but they also face problems in obtaining finance, thereby hampering their ability to grow. For example, Oyeorgba (2014) examined the relationship between size and voluntary disclosure of small firms in Sweden and found that voluntary disclosure was higher in larger firms compared to the smaller ones.

Gross Profit Margin

Gross profit margin is the percentage of revenue you retain after accounting for costs of goods sold. In the big picture view, gross profit simply shows how much money you make against the cost of the product so you can project and interpret profit potential. Gross profit margin is the percentage of revenue you retain after accounting for costs of goods sold. The figure is common and much needed as a basic means of measuring your business profit. The ways you can analyze and use the gross profit figures are endless. In the big picture view, gross profit simply shows how much money you make against the cost of the product so you can project and interpret profit potential. Gross profit margin is generally important because it is the starting point toward achieving a healthy net profit. When you have a high gross profit margin, you are in better position to have a strong operating profit margin and strong net income. For a newer business, the higher your gross profit margin, the faster you reach the break-even point and begin earning profits from basic business activities. This does not always mean a high

margin is possible however. The pricing strategy and competition will ultimately drive how the margin reacts to the consumer buying habits. You do want to capture the highest possible margin without sacrificing sales to maximize revenue.

Board Size

Literature on board size is of divergent views and results. Some studies results revealed that large board size is an indication of better and viable governance, whereas, some other studies results proved such as wrong and posited that smaller board size enveloped the elements of better governance with outputs of reliable and quality financial reporting. Board size is often used by some scholars to measure the quality of corporate governance and financial reporting. The board of a firm is responsible in ensuring and monitoring the quality of information in financial reports. Results of several studies have revealed that the twins of sound governance and board composition reduce the adverse effects of earnings management as well as the likelihood of creative financial reporting. Board size is the number of directors, both the executive and non-executive members duly elected and appointed to govern the affairs of the company independently and responsible in putting the necessary checks and balances. However, there is no one optimal size for a board. Number of board members considered to play a critical role that directly and indirectly affect firm performance (Hieu & Lan, 2015). Accordingly, board size is influenced by company's strategic vision bordering elements in firm size, ownership structure, market characteristic, board demographics, board structure, board recruitment, board member motivation and criteria, board education and evaluation, and board leadership, etc.

Jensen (1976) avowed that board membership should not exceed seven or eight number in order to function effectively. He further averred that smaller boards enhance communication, increase cohesiveness and bring about proper and adequate co-ordination, which resultantly make monitoring more effective. If Boards are properly coordinated and do their woks independently, the criticism in them failing to meet their governance responsibilities will reduce. The expected responsibilities of the board been emphasized are on board independence, board leadership structure, board size and committees. Kiel and Nicholson (2003) view the board as the firm's highest-level control mechanism, with ultimate responsibility of overseeing the activities of the firm. The larger the board the more complex it will be as regard decision making. Many scholars argued that the assertion that larger board size connotes viable governance is a misconception. On the contrary other scholars debunked the assertion that larger size boards are better off. Results of empirical studies showed that smaller board size is associated with higher firm value, while large boards are associated with a non-financial disclosure.

Prior literature shows that board size plays a significant role in directors' viability to check on managers. Padilla (2002) finds that categorization of board members into different committees largely depends on the size of the board. Serrasqueiro and Mineiro (2018) further suggest that larger boards are able to commit more time and effort to monitor management. The functional effectiveness and efficiency of board size hinges largely on the connectivity to the inner workings of the board by various standing board committees which significantly play

various supportive roles to complement boards' decision-making and supervisory functions. Such divisionalization of functions based on specialized standing committees help shortened board decision making process and board effectiveness is thus enhanced through the type and composition of board committees. This is because most of the strategic decision is undertaken at the committee level. In some countries, board membership is structured to embody standing committees of audit, remuneration, and nomination to assist the boards with the multiple functional responsibilities.

Intellectual Capital Information Disclosure

Intellectual Capital Disclosure is defined by Abeyesekera and Guthrie (2003) as a report intended to meet the information needs of users who are unable to command the preparation of reports about Intellectual Capital tailored so as to satisfy specifically all of their information needs. Intellectual Capital Disclosure represents an approach that can be used to measure intangible assets and describe the results of a company's knowledge-based activities (Ismail, 2008). Intellectual capital is a set of non-financial, non-physical resources that procures a competitive advantage for the enterprise (AL-Hamadeen & Suwaidan, 2014). They suggest that intellectual capital is the aggregate sum of intangible assets which comprise both human and structural capital. Bontis (2003) stressed that structural capital encompasses the hardware, software, database, systems, work processes, business models, organisational structure, patents, trademarks, trade secrets and all other codified knowledge. Roos (2005) described intellectual capital as all non – monetary and non – physical resources that are fully or partly controlled by the organisation and that contribute to the organisations value creation (Ping, 2012). The type of intellectual capital disclosure is valuable information for investors, as it can help them to reduce the uncertainty of the company's future prospect and facilitate in valuing the firm (Bukh, 2003). Marr, Gray & Neeley (2003) note that corporate organizations need to disclose intellectual capital information in their annual reports to help formulate their strategies, assess strategy executions, diversification and expansion decisions and as avenue for compensations and to communicate measures to external stakeholders. Price water house Coopers (1999) notes that information disclosure of intellectual capital will facilitate transparency and inspire a sense of faith among the workforce and supports long term vision of the organisation. Vergauwen and Vanalem (2005) stated three opposing factors for intellectual capital disclosure, to include the transparency drawback in competitive markets; regulatory barriers; and, auditor conservatism. However, Neysi, Mazraeh and Mousavi (2012) stated that decision makers may be interested in receiving intellectual capital reports, the reasons they stated are: pursuit of quantification of intangible assets; timeliness of human behaviour as a proxy of performance; and defence against the distortion of GAAP-related financial calculations).

It was observed that there is inadequate information disclosure provided in the previous traditional financial report and was insufficient to fulfil the stakeholders need and exposed them to risk like the investor's confidence; consequent of which firms subsequently disclose their information on Intellectual capital (Rahim, Atan & Amrizah, 2011). Damarchi, Amiri and Rezvani (2012) explained that rapid emergence of information and communication technologies increased the momentum of intellectual capital (IC) in 1990s. Azman and

Kamaluddin (2009) noted that IC information disclosure reflects the company performance whereby it encourages users' better decision making and evaluation on the company for preceding periods as well as reducing ambiguity as economic value derives from production of goods and creation of IC. Qualitative information disclosure of intellectual capital could assist to reduce the risk of a potential investor in making wrong decisions (Halim, 2013; An, Davey & Eggleton, 2011; Abeysekera, 2010). The European Commission, (2006) emphasizes two main reasons for intellectual capital reporting: 1) reporting of intellectual capital provides additional information which can be used to improve the management of the company as a whole. 2) reporting of intellectual capital complements the financial statement of the company and therefore provides a broader, more truthful image of the company (Basta & Bertilsson, 2009). Internal strategic decision-making and external disclosure should focus on IC information such as staff competencies, managerial capabilities, customers and suppliers' relationships, strategic collaborations, R&D, and organizational systems etc.).

Theoretical Framework

Stakeholders & Positive Accounting Theory (SPAT)

The rationale for theory is to explain why certain phenomena or events happened in accounting information disclosures we use theory to comprehend or explain why we carry out or adopt certain method or basis of accounting. The study adopts Stakeholders' and Positive Accounting theory (SPAT) ideologies see (Egbunike, Jesuwunmi, Adewoyin, Ogunmeru, 2018). Edward Freeman was one of the first theorists to present the stakeholder theory as inherent in management discipline in the eighties (Freeman, 1984; Freeman, Wicks, & Parmar, 2004). The argument behind the theory was that economic theories were based on outdated images of the firm. New ways of thinking about business organization were owned by various stakeholders (Learmount, 2002). Stakeholder theory is a theory of organizational management and business ethics that addresses morals and values in managing an organization (Asemah, Okpanachi & Olumuji, 2013). Meanwhile, stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business, and rejects the separation of economic from ethical values (Freeman *et al.*, 2004). Freeman and Reed (1983) have identified stakeholders as "the groups who have an interest in the actions of the firm. Some scholars see stakeholder theory and redefined stakeholders as any individual or group who has an interest in the firm because he (or she) can affect or is affected by the firm's activities (Carroll, 1999; Freeman, 1984).

Positive Accounting Theory (PAT) was propounded in the mid-1960s. It developed from the studies of the popular theorist Fama in the 1960s, mainly the study that linked to the Efficient Markets Hypothesis. 'Positive' Accounting theory was popularized with the works of Gordon (1964). He argued that management was likely to manipulate the information in the financial reports in its own favour by applying accounting procedures that maximize their own value. Afterwards several attempts had been made to provide a positive theory of financial reporting and disclosures. They tried to provide rationale why accountants do what they do and explained its effect on stakeholders and resource distribution (Egbunike, Jesuwunmi, Adewoyin, Ogunmeru, 2018).

'Positive' Agency theory is focused on proffering solution to the problems that can crop up in agency relationships. Agency relationship is a contract under which the owners (principals) of the firm engage the manager (agent) to perform some service on their behalf. Under this arrangement, the owners delegate some decision-making authority to the manager. It is supposed that both parties are value maximizers, with varying philosophies and this could result in divergent and uneven interest between them. Shareholders want to maximize net present value of firm while the managers would want to maximize utility, of which income is part. Most cases, the agent will not always act in the best interests of the principal. The Managers could also hide information for selfish purpose by non-disclosure of important facts about the firm. Shareholders face ethical dilemmas because most times they cannot ascertain or evaluate the decision made by their agents (managers). This conflict-of-interest results to "agency problem" a.k.a. "principal-agent problem" whose resolution incurs agency costs (Al-Shammari, 2005; Jensen 1983; Jensen & Meckling, 1976 as cited in Egbunike, Jesuwunmi, Adewoyin, Ogunmeru, 2018).

Review of Related Empirical Studies

Divergent scholars and literatures had examined firms' physiognomies and intellectual capital information disclosure and given empirical evidence on the determinants of intellectual capital and corporate reporting. Nyahas, Ntayia and Muene (2018) investigated stakeholders influence on voluntary disclosure practices of listed firms in Nigeria from the perspective of managers. The data for the voluntary disclosure practices were obtained from financial reports of 92 listed companies. The data were analysed using partial least squares. The results indicate that managers' perception of stakeholders' power and urgency are associated with voluntary disclosure. The result also revealed that legitimacy, firm size and industrial category are not significant predictors of voluntary disclosure. Inlike manner.

In Canada, Maaloul and Zeghal (2015) analysed the relationship between financial statement information (FSI) and intellectual capital disclosure (ICD). The Poisson regression method was used to analyse sample of 126 US companies, divided into two groups – high-tech and low-tech companies. The results show a negative (substitutive) relationship between FSI and ICD, especially in high-tech companies. This indicates that companies with low FSI disclose more information about their IC in annual reports. The study confirms the role of voluntary ICD as a solution towards mitigating the problem of the distortion of financial information due to the lack of accounting recognition of IC as an asset in the financial statements.

Al-Hamadeen and Suwaidan (2014) investigated the Intellectual Capital (IC) voluntary disclosures from annual reports of the Jordanian industrial public listed companies. The multivariate cross-sectional regression analysis revealed that ownership concentration has the highest explanatory power about intellectual capital disclosure. The study equally asserts that intellectual capital is extensively disclosed by industries companies in Jordan.

Omoye (2013) examined factors that can influence companies in Nigeria to disclose intangible assets in their annual reports by using 65 randomly selected firms listed on the Nigerian Stock Exchange over a period of five (5) years (2006-2010). The study made use of descriptive

statistics, correlation, and binary logistic regressions and revealed that the probability for many Nigerian corporate organizations to disclose intangible assets are weakly associated with firms in services-oriented industry.

Haji, and Mubaraq (2012) examined the trends of intellectual capital disclosure in the Nigerian banking sector; Content analysis was used to extract data from the annual reports of the sampled Banks. The result demonstrated that intellectual capital disclosure of Nigerian banks increased moderately over the four-year period of study. Ragini (2012) examined disclosure practices of intangible assets of the top one hundred India, United States and Japanese companies for a period of five years. The multiple regression analysis result reveal that the countries studied show a significant improvement in their overall disclosure scores over the five-year period.

Whiting and Woodcock (2011) examined the presence of voluntary intellectual capital disclosure (ICD) in Australian company reports and the influence of company characteristics (industry type, ownership concentration, listing age, leverage and auditor type) on ICD. Content analysis was used to extract data from a sample of 70 Australian publicly listed firms. The findings of the study reveal that ICD was low with external capital being the most frequently disclosed category. Correlation and regression analysis demonstrated that companies that operate in high technology-based or knowledge-intensive industries, and companies with large Big Four auditing firms show more extensive ICD than those in other industries and without Big Four auditors. A company's ownership concentration, leverage level and listing age did not influence the occurrence of ICD.

Abeysekera (2010) examined the influence of board size on intellectual capital disclosure by Kenyan listed firms. Analyzing the disclosure pattern of top 26 of the 52 firms ranked by the Nairobi Stock Exchange for market capitalization in 2002 and in 2003. This study identified intellectual capital disclosure by three separate categories: internal capital, external capital, and human capital. Results of the logistic regression revealed finds that firms disclosing more tactical internal capital and more strategic human capital have larger boards.

Yi (2010) studied the intellectual capital disclosure in Chinese companies. Content analysis used to extract data from the annual reports of the companies. The findings show that Intellectual capital is not significantly associated with firm size. Ani (2009) examined the intellectual capital reporting and corporate characteristics of public listed companies in Malaysia. The result reveals that intellectual capital disclosure by sample firms is not extensive. Sujan and Abeysekera (2008) Using content analysis of annual reports of the top 20 firms (by market capitalization) listed on the Australian stock exchange in 2004; they investigated the state of intellectual capital reporting practices in Australia. The result of the study confirms that reporting of intellectual capital is yet to be done within a consistent framework. Although most of the reporting was done through qualitative, rather than quantitative statements. Bontis (2003) assessed the intellectual capital disclosure in Canadian corporations Content analysis was conducted on the annual reports of 10,000 Canadian corporations by searching a list of intellectual capital related terms .The results showed that

despite the changing believe on intellectual capital disclosure, some Canadian firms report a significantly reduced disclosure in the annual reports examined while other firms completely omitted Intellectual capital disclosure from their annual reports.

Based on the literature reviewed it can be deduced that most previous studies examined both quantitative and qualitative information disclosure using descriptive statistics or checking for factors that aided intellectual capital disclosures. Nations have divergent qualitative information framework and disclosure requirements; in light of aforementioned the results of previous studies may not be appropriately relevant with Nigerian setting. This observation can best be explained with the declaration of the IASB on qualitative information disclosure. This declaration increased the possibility of non-compliance because in the present era, the accounting profession is bound by pronouncements of the IASB so that a voluntary requirement may impact practice. The previous studies however, adopted research technique or methodology that is not robust enough to cross-examined research data. Furthermore, with the advancement in statistical technique the researchers are able to explain dichotomous variables and previous studies used traditional statistical approach. This study employed the binomial logistic regression to fill the observed weaknesses from previous literature by examining the likelihood of the identified variables to explain qualitative information disclosure in regards to intellectual capital. To the best of our knowledge, these observed gaps have not been addressed by studies from Nigeria. Hence, the study set to determine the likely hood of firms' characteristics in predicting intellectual capital information disclosures.

Methodology

Research Design

The study employed the ex-post facto research design. The study is longitudinal and covered a six-year period involving listed consumer and industrial companies in the Nigerian Stock Exchange. The rationale for the choice of the listed firms for a study of this magnitude is because they are registered and regulated by government; they contribute significantly towards national economy development and have divergent stakeholders' interest. The population of this study consist of twenty-one (21) consumer and fourteen (14) industrial goods companies listed on the Nigerian Stock Exchange as at 31st December, 2017. This forms the total population of thirty-five (35) listed industrial and consumer goods companies for six years period (i.e. panel data). For the purpose of determining the sample size, the study observations are derived from formula for the determination of observations (sample size) in a regression model, stated as: $n \geq 50 + 8m$ (see Eneh et al., 2022).

Where, n =sample size or observations; 50 and 8 are constant or fixed factors; m = number of explanatory variables in a regression model, that is, 4 (we have, board size, gross profit margin, firm values & industry type). $n \geq 50 + 8(5) = 50 + 40 = 90$. We have ninety observations; it implies that our observations should not be less than 90 data points but it can be more than 90 observations or data points in order to have a good-fit model result. The non-probability sampling technique (judgemental/quota sampling) was used in selecting 12 twelve consumer and 10 industrial goods listed companies from the thirty-five (35) selected listed companies to form the sample size of 22 selected listed companies based on market capitalisation and

availability of complete audited annual accounts for six years. This is to ensure that company listed on the two sectors are closely related. A total of one hundred and thirty-two observations (132) were studied.

Table 1: Sample Size Selection 10 Industrial and 12 Consumer Goods were selected based on Market Capitalisation and Availability of Audited Annual Accounts and Reports for 2025

S/N	Names of Consumer Goods Companies	MKT Capitalisation
1	NESTLE NIGERIA PLC. (NESTLE)	808,509,377,040.00
2	NIGERIAN BREW. PLC. (NB)	1,056,521,217,972
3	INTERNATIONAL BREWERIES PLC.	858,287,116,170.60
4	UNILEVER NIGERIA PLC. (UNILEVER)	220,895,458,283.65
5	DANGOTE SUGAR REFINERY PLC	402,061,669,777.10
6	GUINNESS NIG PLC (GUINNESS)	175,230,625,520.00
7	FLOUR MILLS NIG. PLC. (FLOURMILL)	15,637,050,000.00
8	P Z CUSSONS NIGERIA PLC. (PZ)	147,304,698,369.50
9	NASCON ALLIED INDUSTRIES PLC	124,176,527,358.70
10	DANGOTE FLOUR MILLS PLC (DANGFLOUR)	40,000,000,000.00
11	CADBURY NIGERIA PLC. (CADBURY)	53,700,702,777.45
12	CHAMPION BREW. PLC. (CHAMPION)	12,683,784,271.68
NAMES OF COMPANIES-INDUSTRIAL GOODS		MARKET CAPITALISATION
13	DANGOTE CEMENT PLC.	3,621,107,823,562.50
14	LAFARGE AFRICA PLC.	158,290,065,380.00
15	BETA GLASS PLC.	31,048,261,200.00
16	CAP PLC.	20,020,000,000.00
17	CUTIX PLC.	3,575,483,712.78
18	AUSTIN LAZ & COMPANY PLC	2,256,907,400.00
19	PORTLAND PAINTS & PRODUCTS NIGERIA PLC.	1,999,407,148.20
20	BERGER PAINTS PLC	1,912,834,750.20
21	PREMIER PAINTS PLC.	1,279,200,000.00
22	FIRST ALUMINIUM NIGERIA PLC.	696,418,549.86

Source: Nigerian stock Exchange

Source of Data Collection & Analysis

Secondary data was obtained from the audited annual report of companies under study. Non-financial information disclosure data will be obtained from audited annual reports and accounts and compare with the proposed checklist compiled from Global Reporting Initiative (GRI, 2015). Quantitative information which will form the independent variables will be extracted from the quantitative section of the annual reports such as: comprehensive statement of Income, comprehensive statement of financial position and notes to accounts. This study used dichotomous data to measure intellectual capital information disclosures. A similar approach has been used by previous studies (see Eriabie & Odia, 2016; Wachira, 2018; Williams, 2001; Ahmed & Courtis, 1999) on qualitative disclosure studies. The use of

unweighted dichotomous index (0's & 1's) reduces subjectivity involved in determining the weights of each item. The disclosure item was assigned one (1) if it is disclosed in the corporate annual report or zero (0) if it is not disclosed.

For the purpose of the empirical analysis, the study used both inferential and descriptive statistical techniques. Specifically, descriptive statistics was conducted to obtain the sample characteristics via classification table and pie-charts. The binomial/binary logistic regression analysis was also performed to test the effect of the firms' attributes on intellectual capital qualitative disclosure. Diagnostic tests such as Hosmer and Lemeshow Test (Data-fit model prediction), Omnibus Tests (Significance of Model Coefficients) was performed, Box and Tidwell (1962) test (linearity assumption test between continuous predictors and the logit (log odds) by using model interaction was equally conducted to address some basic underlying regression analysis assumptions (see Eneh et al., 2022). In logistic regression, the odds ratio represents the constant effect of predictor X on the likelihood that one outcome will occur. The data conformed to the basic underlying assumptions of binomial/binary logistic regression analysis. The decision was based on 5% level of significance. Accept (H_0) if probability value (i.e. p-value) is equals to or greater than stated 5% level of significance; otherwise reject and accept alternate hypothesis (H_1) if p-value or sig calculated is less than 5% level of significance

Model Specification

Model specification for company physiognomies and intellectual capital information disclosure among Nigeria listed companies: the empirical approach used to analyse the effect of firm Physiognomies on intellectual capital information disclosure is based on binary choice models which describe the probability of disclosing non-financial information between two mutually exclusive alternatives (disclosure (1) and non-disclosure (0))

Let the utility function of firm physiognomies be 'f' where Y_f is a dichotomous variable denoting whether the firm discloses non-financial information or not disclosing. (1 if yes, 0 otherwise).

The Firm will choose to disclose if such choice implies an increase in the accepted level from stakeholders compared to not disclosing:

$$U_{1f}(Y_f=1, X_f) > U_{0f}(Y_f=0, X_f) \dots\dots\dots 1$$

Consequently, the probability that the firm f chooses to disclose can be written as:

$$P_f(Y_f=1) = P_f(U_{1f} > U_{0f}) \dots\dots\dots 2$$

Logit model and probit model are commonly used in research in analysing prediction. According to Pohlman and Leitner (2003) ordinary least square and logistic regression can be used to test the effect on binary outcome but logistic regression is superior to OLS at predicting probabilities on the dependent outcome. Therefore, the empirical model is specified as follows:

$$P_f(Y_f=1) = \frac{1}{1+e^{-}} (\alpha + \beta x_f) \dots\dots\dots 3$$

Where:

Y_i is dependent variable equal to 1 if the firm discloses and 0 if otherwise

P_i is the estimated probability of a firm disclosing non-financial information disclosure.

With logit transformation, the estimated model becomes a linear function of the explanatory variables, which is expressed as follows:

$$\text{Logit}[P_i(Y_i=1)] = \text{Log}\{P_i/(1-P_i)\} = \alpha + \beta X_i \text{-----4}$$

Where:

α is a constant term

β is a vector of coefficients for the independent variable X_i .

X_i is a vector of independent variables.

A coefficient attached to an independent variable is interpreted as change in the logit (log odds that $Y=1$), for a unit increase in the independent variable, with the other independent variable constant. The model was adapted from Van (2012) who identified ten key variables in his study. Some of his variables were dropped after considering differences in socio-economic conditions of the two environments.

$$\text{Non-financial Information Disclosure (NFD)} = f(\text{Company Specific Characteristics [CSC]}) \dots 5$$

Eqn.6 is functional or notational form.

Introduce the measured or observed variables for both exogenous and endogenous variables.

$$\text{ICAD} = f(\text{BZ, GPM, FV, IT}) \dots \text{eqn. 6}$$

An equation 7 is deterministic model for research objective:

$$\text{ICAD}_{it} = \gamma_1 + \beta_5 \text{BZ}_{it} + \beta_6 \text{GPM}_{it} + \beta_7 \text{FZ}_{it} + \beta_8 \text{IT}_{it} \dots \text{eqn. 7}$$

$$\text{NID-[ICAD]} = f(\text{CSC- BZ, GPM, FZ, IT})$$

An equation 8 is binomial logistic regression equation/model:

$$\ln(\text{ODDS})_{\text{ICAD}_{it}} = \gamma_1 + \beta_5 \text{BZ}_{it} + \beta_6 \text{GPM}_{it} + \beta_7 \text{FZ}_{it} + \beta_8 \text{IT}_{it} \dots \text{eqn. 8}$$

$$\text{NID-ICAD} = f(\text{CSC-BZ, GPM, FZ, IT})$$

$$\text{Odd ratio-Exp (B): ODDS} = e^{a+bx} \text{ [the odd ratio prediction equation]}$$

$$\text{ODDS} = e^{\gamma_1 + \beta_5 \text{BZ}_{it} + \beta_6 \text{GPM}_{it} + \beta_7 \text{FZ}_{it} + \beta_8 \text{IT}_{it}}$$

Table 2: Operationalization of Variables

SN	Names	Type/code	Measurement(s)	Apriori Sign
1.	Intellectual capital qualitative information disclosure.	ICAQID-observed Dependent	“1” denotes that it is disclosed in annual report and accounts “0” denotes otherwise.	nil
2.	Board size	BZ-Independent [observed]	Total number of directors on the companies' board.	–
3.	Gross profit margin	GPM-Independent [observed]	Gross profit ÷ revenue	+
4.	Firm value/size	FV-Independent [observed]	Log of total assets	+
5.	Industry taxonomy	IT- dichotomous	NSE classification	NA
6.	γ_1 gamma	fixed/Constant term	Parameter	NA
7.	β_{5-8} -beta	Regression coefficients	Parameters	NA
8.				
9.	i-individual companies in samples	Number of companies	Parameters	NA
10.	$\tilde{Y}$ -Error term	Stochastic random	Parameters	NA

Source: Researcher's Compilation, 2019.

Data Presentation and Analysis

Table 3: Classification Table for Intellectual capital qualitative information disclosure Prediction from Board Size, Gross Profit Margin, Industry taxonomy and Firms' values.

Observed	Predicted		Percentage (%) Correct
	Intellectual capital qualitative information disclosure Undisclosed	Disclosed	
Undisclosed	27	28	49.1
Disclosed	16	61	79.2
Overall	Nil	Nil	88/132 = 66.67
Percentage Intercept/Constant	Nil	Nil	58.3
Predictions	Fractions	Percentages (%)	Probability
Sensitivity	61/77	79.22	0.7922
Specificity	27/55	49.91	0.4991
False Positive	28/89	31.46	0.3146
False Negative	16/43	37.21	0.3721

Source: Researcher's computation via SPSS version-23.

Table 2 is classification table shows that 0.5 allows us to correctly classify 61/77 = 79.22% of the subjects where the predicted event (deciding to disclose) was observed. This is known as the sensitivity of prediction, the P (correct | event did occur-disclose), that is, the percentage of occurrences correctly predicted. We also see that 0.5 allows us to correctly classify 27/55 = 49.91% of the subjects where the predicted event was not observed. This is known as the specificity of prediction, the P (correct | event did not occur-undisclosed), that is, the

percentage of non-occurrences correctly predicted. Overall, our predictions were correct 88 out of 132 times, for an overall success rate of 66.67%. It was only 58.30% for model with intercept only.

Determination of error rates in classification. A false positive would be predicting that the event would occur when, in fact, it did not. Our decision rule (0.5) predicted a decision to disclose 89 times. That prediction was wrong 28 times, for a false positive rate of $28/89 = 31.46\%$. A false negative would be predicting that the event would not occur when, in fact, it did occur. Our decision rule (0.5) predicted a decision not to disclose (undisclosed) 43 times. That prediction was wrong 16 times, for a false negative rate of $16/43 = 37.21\%$. This analysis was also presented in Figure 1 in form of pie-chart.

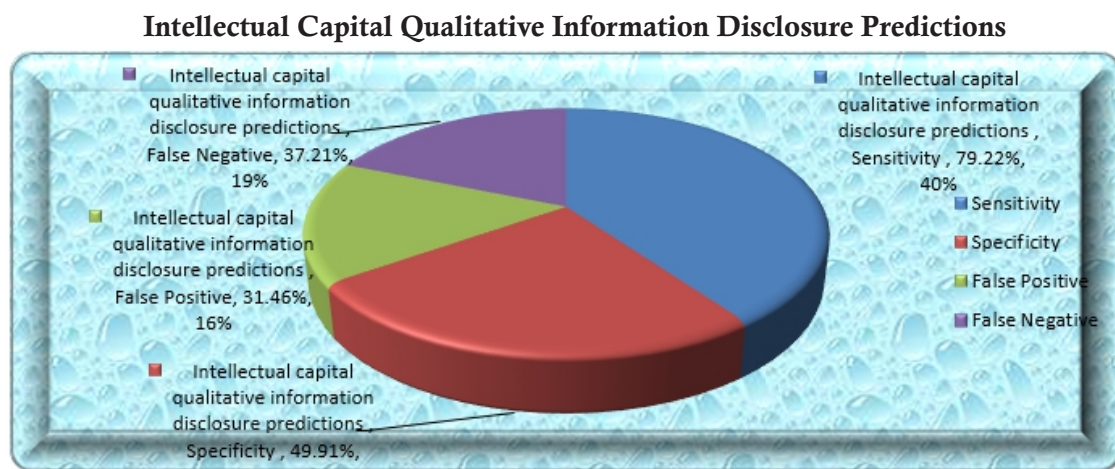


Figure 1: Pie-Chart for Intellectual Qualitative Information Disclosure Prediction from Board Size, Gross Profit Margin, Industry type and Firms' Sizes.

Source: Researcher's design via Microsoft Excel-2012.

Answers to Research Questions

To what extent do board size, gross profit margin, industry type and firms' size jointly predict intellectual capital qualitative information disclosure of listed consumer and industrial goods companies in Nigeria?

Table 4: Model Summary of board size, gross profit margin, industry type and firms' size joint prediction on intellectual capital qualitative information disclosure of listed consumer and industrial goods companies in Nigeria.

-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²
156.037	.162	.218

Source: Researcher's computation via SPSS version-23.

Table 4 presents Binomial logistic regression results of Cox-Snell-R² and Nagelkerke-R² values, which are techniques of computing the explained variation in the explained variable.

These values are referred to as *pseudo-R²* values. The explained change in the dependent variable (intellectual capital qualitative information disclosure) is based on our model ranges from 16.2% to 21.8%; that is, Cox& Snell-*R²* or Nagelkerke-*R²* methods, respectively. Our result is based on Nagelkerke-*R²*. This implied that board size (BZ), gross profit margin (GPM), industry type (IT) and firms' size (FZ) had jointly predicted 21.8% change in the explained variable- intellectual capital qualitative information disclosure (ICAD). Can we presume that the likelihood of risk management information disclosure is not significantly influenced by leverage? This led us to test of hypotheses.

Test of Hypotheses

The effect of Board size, gross profit margin, industry type and firm size do not significantly explain the prediction of intellectual capital qualitative information disclosure of listed consumer and industrial goods companies in Nigeria.

Table 5: Model Prediction of intellectual capital qualitative information disclosure from Board size, gross profit margin, industry type and firms' size of listed consumer and industrial goods companies in Nigeria.

Variables	Exp(β)/ [β]	Sig.	Nagelkerke R ²	% classified correctly	χ ²	df.	Sig.	Remarks
Model			21.8%	66.7%	23.27	4	.000	Accept H ₀
H & L					15.028	8	.059	Model fit perfect
Interaction					-	-	p>5%	not violated
BZ	92.41 [4.53]	.037						significant
GPM	2339.399 [7.758]	.036						insignificant
FZ	1.081 [.078]	.802						insignificant
IT(1)	-.672 [-.84]	.124						insignificant

Source: Researcher's computation via SPSS version-23.

Table 5 shows Binomial logistic regression result of Nagelkerke *R²* values, which explained variation in the dependent variable. Table 5 indicates that there is no violation of linearity assumption and the data perfectly fit the model prediction [$\chi^2(8) = 15.028$; $p = .059$] (Hosmer & Leme show test). The explained variation in the dependent variable 21.8%; that is, our model explained 21.8% (Nagelkerke *R²*) of the variance in the disclosure of intellectual capital qualitative information and correctly classified 66.7%. The logistic regression model was statistically significant, [$\chi^2(4) = 23.27$, $p < .05$]. This implied that consumer goods listed companies are 0.511 times less likely to disclose intellectual capital qualitative information to industrial goods listed companies. The odds ratio for this model shows that for an additional increase in the total number of directors on the company's board, there is 92% likelihood for intellectual capital disclosure to be reported. Similarly, GPM shows a 2339 more likelihood to influence intellectual capital reporting. Finally, a 1% increase in total assets indicates an 81% likelihood of intellectual capital disclosure. Increasing in board size (BZ) and gross profit

margin (GPM) were associated with significant increase in likelihood of disclosing intellectual capital qualitative information; but increase in firm size (FZ) was associated with insignificant increase in likelihood of disclosing intellectual capital qualitative information. Based on the analysis conducted we accept alternate hypothesis (H_a) and reject the null hypothesis (H_0) and conclude that board size (BZ), gross profit margin (GPM), industry type (IT) and firm size had significantly predicted the intellectual capital qualitative information disclosure of listed consumer goods companies and listed industrial goods companies in Nigeria.

Discussion of Findings

The outcome of the study has shown that companies' physiognomies identified as, board size (BZ) and gross profit margin (GPM) show significant likelihood influence on intellectual capital information disclosure of consumer and industrial goods in Nigeria for the period studied while firms' size (FZ) and industry type (IT) indicated opposite result. The results of board size and gross profit margin are positively significant as they jointly predicted the likelihood of intellectual capital information disclosure of the studied consumer and industrial goods companies. This revelation showed a new dimension in the works of qualitative information disclosure; previous studies are more interested in the level of disclosures not factors that influence the likelihood of qualitative disclosure.

While industry type and firm size showed opposite results that is, they are positively insignificant as they did not jointly predict the likelihood of intellectual capital information disclosure of the studied consumer and industrial goods companies. The finding however conforms to Nyahas, Ntayia and Muene (2018) and Yi (2010) who agreed to a non-significant likelihood influence of intellectual capital information disclosure. The result equally contradicts with the finding of (Ayuba & Oba, 2016) who asserts significant likelihood influence of firms' size and industry type on intellectual capital information disclosure. Other related or similar studies largely focused on the disclosure levels of intellectual capital qualitative information disclosures; they (see; Abeysekera, 2010; Al-Hamadeen & Suwaidan, 2014; Bontis, 2003; Maaloul & Zeghal, 2015; Omoye, 2013; Sujan & Abeysekera, 2008) did not focus on the factors that influence the likelihood of intellectual capital qualitative information disclosures which is the thrust of this study.

Findings, Conclusion and Recommendations

Board size, Gross profit margin (GPM), industry type (IT) and firm size had significantly predicted the intellectual capital qualitative information disclosure of listed consumer goods companies and listed industrial goods companies in Nigeria. Voluntary disclosure has been viewed by previous researches as contributing to improved confidence in corporate reporting by stakeholders. More so, there was a significant prediction of board size, gross profit margin, industry type and firm size on Intellectual Capital disclosure of these companies, indicating that intellectual capital as an intangible asset has a great impact on today's knowledge-based economy thereby improving the competitive advantage of these companies. Based on the above findings, we recommend that Training and education should be provided by professional institutions to employee of these industries. Adequate knowledge of components

of human and structural capital will improve the importance of intellectual capital disclosure. This will go further too greatly improve their awareness amongst globally competitive industries.

Previous studies investigated the contribution of single variables of firm attributes to explain Non-financial Information disclosure. The exceptionality of this study is that it combined more than one variable to explain Non-financial Disclosure. Furthermore, the study employed the binomial logistic regression to ascertain the probability of these combined variables to influence non-financial information disclosure. The degree to which predicted probabilities agree with actual outcomes was expressed as either a measure of association. The study also develops a conceptual model on intellectual capital information disclosure and its relationship with the explanatory variable to determine the extent each item explains the dependent variable. We reached for further study that a joint prediction study of Firm attributes on non-financial information in another sector may show an exciting result that will help policy makers take reliable decisions.

References

- Abeysekera, I. (2010). Intellectual capital reporting between a developing and developed nation, *Journal of Intellectual Capital*, 8(2), 329-345.
- Abeysekera, I., & Gluthrie, G. (2003). An empirical investigation of annual reporting trends of intellectual capital in Sri-Lanka, *Critical Perspectives in Accounting*, 16(3), 151–163.
- Afolabi, M. O. (2013). Effect of financial reporting on investment decision making of manufacturing firms in Nigeria, *European Journal of Humanities and Social Sciences*, 22(1), 1127-1142
- Ahmad, K., & Courtis, J. K. (1999). Associations between corporate characteristics and disclosure levels in annual reports: A meta-analysis, *British Accounting Review*, 2(31), 35-61.
- Akbaş, H. E. (2014). Company characteristics and environmental disclosure: An empirical investigation on companies listed on borsa Istanbul, *The Journal of Accounting and Finance*, 2(2), 145-164.
- Al-Hamadeen, R., & Suwaidan, M. (2014). Content and determinants of intellectual capital disclosure: Evidence from annual reports of the Jordanian industrial public listed companies, *International Journal of Business and Social Science*, 5(8), 165-175.
- Ali, S. M., & Isa, M. A. (2018). Firms attributes and corporate social responsibility disclosure: A literature review, *International Journal of Academic Research in Business and Social Sciences*, 8(4), 312–325.

- An, Y., Davey, H., & Eggleton, I. R. C. (2011). Towards a comprehensive theoretical framework for voluntary IC disclosure, *Journal of Intellectual Capital*, 12(4), 571–585.
- Ani Casimir, K. C. (2009). The role of traditional institutions and intangible resources in cultural development among African indigenous peoples: A religio-philosophical exploration of the Ezeagu Wawa indigenous African people. *Journal of African. Studies*, 10.
- Asemah, E. S., Okpanachi, R. A., & Olumuji, E. O. (2013). Communicating corporate social responsibility performance of organisations: A key to winning stakeholders' goodwill, *International Journal of Arts and Humanities*, 2(3).
- Azman, H., & Kamaluddin, A. (2009). Does disclosure of non-financial statement information reduce firms' propensity to under-invest? *Dissertation Presented to the Graduate School of The University of Florida*.
- Ball, R. (2006). Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. In: *Brookings-Wharton Papers on Financial Services*, edited by R. Litan and R. Herring. Sashington, DC: Brookings Institution Press: 127-83.
- Barth, M. E., & Schipper, K. (2008). Financial reporting transparency, *Journal of Accounting, Auditing & Finance*, 23(2), 173–190.
- Basta, M., & Bertilsson, R. (2009). *Innovation and internal reporting of intellectual capital: An empirical study*, University of Gothenburg, Department of Business Administration. Retrieved from <https://gupea.ub.gu.se/handle/2077/20891?show=full>
- Bontis, N. (2003). Intellectual capital disclosure in Canadian Corporations, *Journal of Human Resource Costing & Accounting*, 7(1), 9-20. <https://doi.org/10.1108/eb029076>
- Bose, S., Saha, A., Khan, H. Z., & Islam, S. (2017). Non-financial disclosure and market-based firm performance: The initiation of financial inclusion, *Journal of Contemporary Accounting & Economics*, 12, 1-50.
- Brooking, A. (1997). *Intellectual capital: Core asset for the third millennium*, International Thomson Business Press.
- Bukh, P., Nielsen, C., Gormsen, P., & Mouritsen, J. (2005). Disclosure of information on intellectual capital in Danish IPO prospectuses, *Accounting Auditing and Accountability, Journal*, 18, 713-732.
- Bushman, R. M., & Piotroski, J. D. (2006). Financial reporting incentives for conservative accounting: The influence of legal and political institutions, *Journal of Accounting and Economics*, 42(2), 107–148.

- Nicholas, D. & Shyam, S. (1980). FASB's statements on objectives and elements of financial accounting: A review, *The Accounting Review*, 55(1), 1-21. <https://www.jstor.org/stable/246167>
- Bushman, R., & Smith, A. (2004). Financial accounting information and corporate governance, *Journal of Accounting and Economics*, 32(2), 237-333.
- Carroll, A. B. (1999). Corporate social responsibility: Evolution of a definitional construct, *Business and Society*, 38, 268-295.
- Chaney, T., David S., & David T. (2012). The collateral channel: How real estate shocks affect corporate investment, *American Economic Review*, 102(6), 2381-2409.
- Choi, T. H., & Pae, J. (2011). Business ethics and financial reporting quality: Evidence from Korea, *Journal of Business Ethics*, 10(3), 403-427.
- Damarchi, Q. V., Amiri, F., & Rezvani, A. H. (2012). Disclosure and reporting of intellectual capital In. *Interdisciplinary Journal of Contemporary Research in Business*, 3(9), 155-167.
- Deegan, C. (2002). The legitimizing effect of social and environmental disclosures: A theoretical foundation, *Accounting, Auditing and Accountability Journal*, 15(3), 282-311.
- Eccles, R. G., Serafein, G., & Consulting, M. K. (2011). Market interest in non-financial information, *Journal of Applied Corporate Finance*, 23(4), 113-128.
- Egbunike, P. A., Jesuwunmi, C. A., Adewoyin, A. O., Ogunmeru, A. O. (2018). Empirical appraisal of IAS-16 disclosures compliance level of listed cement manufacturing firms in Nigeria, *International Journal of Economics and Business Administration*, 4(2), 56-76. <http://www.aiscience.org/journal/ijeba>
- Eneh, O. M., Adebunmi, A. A., Oti, F. A., & Jesuwunmi, C. D. A. (2022). Nigeria listed companies' attributes and environmental information disclosures, *International Journal of Management and Accounting*, 4(6), 117-132, 2022. doi.org/10.34104/ijma.022.001170132
- Edvinsson, L. & Malone, M. (1997). *Intellectual capital*, Harper Business.
- Eriabie, S. & Odia, J. (2016). The influence corporate governance attributes on corporate social and environmental disclosure quality in Nigeria, *ESUT Journal of Accountancy*, 7(1), 217-235.

- Ernst and Young. (2017). Is your non-financial performance revealing the true value of your business to Investors? *Tomorrow's Investment Rules 2017*, Available online: <https://www.ey.com/gl/en/services/assurance/climate-change-and-sustainability-services/ey-nonfinancial-performance-may-influence-investors> (accessed on 12 August 2018).
- Financial Accounting Standards Board (FASB), (2000). *Conceptual framework*.
- Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2004). Cost of equity and earnings attributes. *The Accounting Review*, 79(4), 967-1010.
- Freeman, R. E., Wicks, A. C. & Parmar, B. (2004). Stakeholder theory and the corporate objective revisited, *Organ. Sci.*, 15(3), 364–369.
- Freeman, R. E. (1999). Divergent stakeholder theory, *Academy of management Review*, 24(2), 233–236.
- Freeman, R. E., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance, *California Management Review*, 25(3), 88-106. <https://doi.org/10.2307/41165018>
- Ghasempour, A., & Md-Yusuf. M. A. (2014). The effect of fundamental determinants on voluntary disclosure of financial and non-financial information: The case of internet reporting on the Tehran stock exchange, *The International Journal of Digital Accounting Research*, 14(3), 37-56
- Global Reporting Initiative (GRI) (2015). *GRI G4 Guidelines Part 2 implementation manual*. Retrieved from <https://www.globalreporting.org/Pages/resource-library.aspx>
- Gordon, R. A. (1964). Has Structural unemployment worsened? *A Journal of Economy and Society*, 3(3), 53-78. <https://doi.org/10.1111/j.1468-232X.1964.tb00827.x>
- Haji, A. A., & Mubaraq, S. (2012). The trends of intellectual capital disclosures: Evidence from the Nigerian banking sector, *Journal of Human Resource Costing & Accounting*, 16(3), 184-209. doi: 10.1108/14013381211286360
- Halim, H. A. (2013). Intellectual capital disclosure emphasis: An analysis of Malaysian annual reports. *In Proceedings of Global Business and Finance Research Conference*.
- Healy, P. M., & Palepu, K. J. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature, *Journal of Accounting and Economics*, 3(31), 405–440

- Hieu, P. D., & Lan, D. T. H. (2015). Factors influencing the voluntary disclosure of Vietnamese listed companies, *Journal of Modern Accounting and Auditing*, 11(12), 656-676
- Holthausen, R. (2009). Accounting standards, financial reporting outcomes, and enforcement, *Journal of Accounting Research*, 47(2), 447–458.
- IASB. (2015). International Accounting Standard Board (IASB) *Conceptual Framework for Financial Reporting - Exposure Draft ED/2015/3*. ed. IFRS Foundation.
- Ilaboya, O. J. (2008). *Advanced financial accounting*, Benin City, Nigeria: Mindex Press.
- Ismail, T. H. (2008). *Intellectual capital reporting in knowledge economy: Evidence from Egypt*. International conference on economic directions III: The College of Business Administration, Kuwait University.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kiel, G. C., & Nicholson, G. J. (2003). Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance, *Corporate Governance: An International Review*, 11(3), 189–205.
- Learmount, S. (2002). *Theorizing corporate governance*, New organizational alternatives.
- Maaloul, A. & Zeghal, D. (2011). The accounting treatment of intangibles – A critical review of the literature, *Accounting Forum*, 35, 262-274. doi:10/1016/j.accfor.2011.04.003
- Maroun, W. (2017). Assuring the integrated report: Insights and recommendations from auditors and preparers, *The British Accounting Review* 49, 329–46.
- Marr, B., Gray, D., & Neely, A. (2003). Why do firms measure their intellectual capital, *Journal of Intellectual Capital*, 4(4), 441-464.
- Menon, K., & Williams, D. D. (2010). Investor reaction to going concern audit reports, *The Accounting Review*, 85(6), 2075–2105.
- Modugu, K. P., & Eboigbe, S. U. (2017). Corporate attributes and corporate disclosure level of listed companies in Nigeria: A Post-IFRS adoption study, *Journal of Finance and Accounting*, 5(2), 44-52.

- Moerman, R. W. (2006). The role of information asymmetry and financial reporting quality and debt contracting: Evidence from the secondary loan market, *Journal of Accounting & Economics forthcoming*. Retrieved from: <http://papers.ssrn.com/sol3/papers.cfm?abstract=876X67> (Downloaded: 11/09/2017)
- Neysi, S. A., Mazraeh, S., & Mousavi, Z. (2012). The importance of intellectual capital disclosure, *International Journal of Business and Social Science*, 3(15).
- Nyahas, S. L., Ntayi, J. M., Kamukama, N., & Munene, J. (2018). Stakeholders influence on voluntary disclosure practices by listed companies in Nigeria: An investigation of managers' perception. *International Journal of Law and Management*, 60(2), 267-283.
- Omoye, A. S. (2013). Determinants of intangibles assets disclosure in annual report: Evidence from Nigerian listed companies. *International Journal of Asian Social Science*, 3(5), 1152-1165.
- Onoja, A., & Agada, G. O. (2015). Voluntary risk disclosure in corporate annual reports: An empirical review, *Research Journal of Finance and Accounting*, 6(17).
- Owusu-Ansah, S. (1998) The impact of corporate attributes on the extent of mandatory disclosure and reporting by listed companies in Zimbabwe, *The International Journal of Accounting*, 33, 605–631
- Oyerogba, E. O. (2014). The use of voluntary disclosure in determining the quality of financial statements: Evidence from the Nigeria listed companies, *Serbian Journal of Management*, 9(2), 263 - 280
- Padilla, A. (2002). Can agency theory justify the regulation of insider trading? *Quarterly Journal of Austrian Economics*, 5(1) 3–38.
- Pandey, I. M. (2005). *Financial Management*, Vikas Publishing House Pvt Limited.
- Ping, L. E. E. S. (2012). *Corporate governance and strategic CSR practices influence on credibility of sustainability report*, Universiti Sains Malaysia.
- Price Water House Coopers (2009). *IFRS for small and medium-sized entities*, Pocket Guide, Retrieved from: <http://www.pwc.com>
- Ragini E. (2012). Corporate disclosure of intangibles: A comparative study of practices among Indian, US, and Japanese Companies. *Vikalpa*, 7(3), 51-72.
- Rahim, A., Atan, R., & Amrizah, K. (2011). Intellectual capital reporting in Malaysian technology industry, *Asian Journal of Accounting and Governance*, 59, 51–59.

- Roos, I. (2005). Methods of investigating critical incidents: A comparative review, *Journal of Service Research*, 4, 193–204.
- Serrasqueiro, R. M., & Mineiro, T. S. (2018). Corporate risk reporting: Analysis of risk disclosures in the interim reports of public Portuguese non-financial companies, *Accounting and Administration*, 63(2), 1-23.
- Sierra-Garcia, L., Garcia-Benau, M. A., & Bollas-Araya, H. M. (2018). Empirical analysis of non-financial reporting by Spanish companies. *Admin Science*, 8(29), 1-17.
- Soltani, B. (2007). *Auditing: An international approach*, Pearson Education-Prentice-Hall
- Sujan, A. & Abeysekera, I. (2007). Intellectual capital reporting practices of top Australian firms. *Australian Accounting Review*, 17(42). <http://dx.doi.org/10.1111/j.1835-2561.2007.tb00445.x>
- Vergauwen, P. G. M., & Vanalem, F. I. C. (2005). Annual report: IC disclosure in the Netherlands, France and Germany, *Journal of IC*, 6, 89– 10.
- Whiting, R. H., & Woodcock, J. (2011). Firm characteristics and intellectual capital disclosure by Australian companies. *Journal of Human Resource Costing & Accounting*, 15(2), 102-126. doi: 10.1108/14013381111157337
- Williams, S. (2001). Is intellectual capital performance and reporting practice related? *Journal of Intellectual Capital*, 2(3), 192-203.
- Yi, A., & Davey, H. (2010). Intellectual capital disclosure in Chinese (mainland) companies, *Journal of Intellectual Capital*, 11(3), 326–347.